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**NOTE BY THE SECRETARY-GENERAL**

The Secretary-General has the honour to transmit to the Security Council a report submitted by the Executive Chairman of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Security Council resolution 687 (1991).

Annex

Seventh report of the Executive Chairman of the Special Commission,  
established by the Secretary-General pursuant to paragraph 9 (b) (i)  
of Security Council resolution 687 (1991), on the activities of the  
Special Commission

I. INTRODUCTION

1. The present report is the seventh on the activities of the Special Commission established pursuant to paragraph 9 (b) (i) of Security Council resolution 687 (1991), submitted to the Security Council by the Executive Chairman of the Commission. It is the sixth such report provided in accordance with paragraph 3 of Security Council resolution 699 (1991). It covers the period from 15 December 1993 to 17 June 1994 and is further to the reports contained in documents S/23165, S/23268, S/24108 and Corr.1, S/24984, S/25977 and S/26910.

2. Building on the Commission's recommendation, contained in paragraph 38 of S/26910, to consolidate its reporting obligations under resolutions 699 (1991) and 715 (1991), this shall be the last report in this series. This recommendation was made as the Commission's work now focuses essentially on ongoing monitoring and verification activities and hence, if the previous reporting sequence were maintained, there would be considerable duplication. A consolidated reporting approach would provide the Security Council with a more concise, comprehensive and continuous written account of all the activities of the Commission on a biannual basis. Unless the Council requests otherwise, a further report under resolution 715 (1991) will be submitted in October 1994 and thereafter consolidated reports under both resolutions will be submitted each February and August. Oral reporting will continue on a monthly basis, as requested by the Council, and special written reports will be submitted as circumstances dictate.

II. ORGANIZATIONAL AND ADMINISTRATIVE ISSUES

3. Since the last report, there have been no further changes in the composition of the Special Commission. The Commission held its seventh plenary session from 10 to 12 May 1994. This was followed by meetings of the Commission's working groups on Chemical Weapons and Ongoing Monitoring and Verification.

4. Currently there are 41 staff in the Office of the Executive Chairman, 23 in the Bahrain Field Office, and 69 in the Baghdad Field Office.

5. There is still no agreement on the sale of Iraqi oil to finance United Nations operations resulting from the cease-fire resolution. Current expenses have been met from voluntary contributions from Member States and funds made available from frozen Iraqi assets in accordance with Security Council resolution 778 (1992). However, in the absence of Iraqi agreement to sell oil, of Iraq's acknowledgement of its obligations under resolution 699 (1991) to meet

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the full costs of the tasks authorized by section C of resolution 687 (1991) and of an appropriate mechanism for this purpose, the problem of the financing of the Commission's operations remains a matter of great concern. Further cash contributions by Governments are thus urgently required.

6. Governments have continued to support the operation of the Special Commission through the contribution of personnel, services and equipment. Further information on financial and organizational issues can be found in appendix I to the present report.

### III. STATUS, PRIVILEGES AND IMMUNITIES

7. The status, privileges and immunities of the Special Commission, the International Atomic Energy Agency (IAEA) and the United Nations specialized agencies involved in the implementation of Security Council resolution 687 (1991) continue to be regulated by the relevant agreements and Council resolutions and decisions.

8. The Commission and IAEA on the one hand and the Government of Bahrain on the other have extended for a further six months, until 30 September 1994, the agreement provided for in the exchange of letters relating to the facilities, privileges and immunities of the Special Commission and IAEA in Bahrain.

9. In Iraq, there were fewer problems in the implementation of the Commission's status, privileges and immunities and with the security of Commission personnel and property. Such problems that there were, were minor in comparison with earlier experiences, with two exceptions: an incident in which an Iraqi fired on an UNSCOM vehicle convoy in January 1994 and another in April 1994 in which a crowd stoned an UNSCOM helicopter while it was undertaking a medical evacuation of two members of the United Nations Guard contingent. Iraq is extending to current inspection teams all the support and assistance requested by them.

### IV. DEVELOPMENTS

#### A. Political developments

10. Iraq's acceptance on 26 November 1993 of resolution 715 (1991) and the plans for ongoing monitoring and verification approved thereunder opened the way for the implementation of the plans, the first stage of which is to establish the baseline data for ongoing monitoring and verification. Immediately upon Iraq's acceptance, the Commission informed Iraq that the latter's earlier reports about its dual-purpose capabilities were inadequate in the light of the requirements of resolution 715 (1991) and so full initial declarations made in conformity with these requirements should be submitted to the Commission. Initial declarations were received in mid-January 1994.

11. On the basis of Iraq's declarations and further information provided by Iraq in response to the Commission's requests for supplementary information, as well as information available to the Commission from other sources (most notably

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the results of its own inspections) and analysis, the Commission then updated its lists of sites, equipment and materials to be monitored under the Commission's plan. The Commission is now in the process of conducting baseline inspections of each of the sites on the list, the end result of which will be monitoring and verification protocols for each site. In parallel, sensors and tags and seals are being installed in line with decisions made on the basis of the recommendations of baseline inspection teams. Iraq has publicly committed itself to cooperate with the Commission and IAEA in this endeavour and the teams are receiving the support and assistance they request of their Iraqi counterparts. This is a welcome change in Iraq's attitude.

12. The political dialogue initiated as part of the resolution of the camera crisis in July 1993 has also continued. High-level meetings were held in New York in March and May 1994, in Baghdad in February and April 1994 and in Amman in May 1994. A further round is scheduled in Baghdad for July 1994.

13. During an earlier such meeting held in New York in November 1993, technical talks on chemical weapons were held in which the Commission suggested to Iraq that, in order to address concerns about the vagueness of Iraq's account of its imports for its chemical weapons programme, Iraq should conduct brainstorming seminars with the officials involved in the programme to see whether collectively they could improve on the precision and completeness of the data. Iraq agreed to pursue the idea, the results of which were received and further explored in subsequent contacts during the period from February to April 1994.

14. During the February round of talks, there were some technical discussions, but the major element was the joint statement released by the Deputy Prime Minister of Iraq, Mr. Tariq Aziz, and the Executive Chairman at the end of the meeting. That statement, which called for the expediting of the inspection process and in which Iraq stated that it would welcome inspection teams and facilitate their tasks, reflected the increasingly amenable attitude being adopted by the Iraqi authorities in their dealings with the Commission.

15. However, this trend, on the political level, recorded a severe reverse in the March talks. Mr. Aziz accused the Commission and the Executive Chairman of acting for political motives not related to the mandate and directly under the influence of one Member State. He stated that Iraq had lost confidence in the Commission and saw little reason to continue cooperating with it if the Commission would not set a date for the lifting of the oil embargo. Indeed, he threatened that cooperation would be withdrawn if no date were set. The meeting broke up with no date set for a further round of high-level talks. Meanwhile, no change was noted in the level of support and assistance being proffered to inspection teams on the ground.

16. In the second week of April, Iraq requested a further round of high-level talks, citing "important developments" since the previous round. The atmosphere of this round of talks was in marked contrast with the March talks. The result was a further joint statement, in which Iraq publicly committed itself to continue to cooperate with the Commission and IAEA in the conduct of ongoing monitoring and verification and to respect their rights and privileges throughout this stage of their work. This was welcomed by the Commission and IAEA, continued cooperation and respect of their rights and privileges after the

lifting of the oil embargo being the prime concern as to whether they would be able to conduct effective ongoing monitoring and verification.

17. These positive trends were confirmed in the May meetings held in New York and Amman. In addition, at the Amman talks, the Commission and IAEA responded to questions raised by Iraq on the proposed export/import monitoring mechanism required under paragraph 7 of resolution 715 (1991).

#### B. Operational developments

18. The period under review has seen the most intense inspection activity in the Commission's history. Across the board, with Iraq's acceptance of resolution 715 (1991), activities have focused more on establishing the system of ongoing monitoring and verification than on searching for or destroying weapons capabilities. This process is under way in the form of: efforts to establish the baseline data required for initiation of ongoing monitoring and verification; analysis of Iraqi declarations; and the conduct of inspections at declared and designated sites. In New York, much effort has been devoted to the compilation of site folders which, upon completion of the baseline process, will evolve into monitoring and verification protocols for each site to be monitored.

19. In the chemical weapons area, the activities of the Chemical Destruction Group at Muthanna were concluded on 14 June 1994. This brought to a successful conclusion a unique multinational undertaking, fulfilling the Commission's mandate to eliminate Iraq's declared chemical weapons stockpile and doing so expeditiously, at minimal expense, and with no damage to the environment. This was a two-year operation, involving some 100 experts, in the course of which the following were destroyed: over 480,000 litres of chemical warfare agents (including mustard agent and the nerve agents sarin and tabun); over 28,000 chemical munitions (involving 8 types of munitions ranging from rockets to artillery shells, bombs and ballistic missile warheads); and nearly 1,800,000 litres, over 1,040,000 kilograms and 648 barrels of some 45 different precursor chemicals for the production of chemical warfare agents. The Commission wishes to pay special tribute to the international experts and Iraqi personnel who brought this operation to such a successful conclusion in the harshest of environments.

20. The other main focus of effort in the chemical weapons area lay in pressuring Iraq to provide further information on its chemical weapons programme. This pressure continues to pay off: Iraq's most recent account of its past chemical weapons production is much fuller than earlier versions and, for the first time, is supported by a list of letters of credit issued for the import of equipment and materials purchased for the programme. This should allow the Commission, with the assistance of Governments, to verify large parts of Iraq's explanation of its chemical weapons programme. In addition, the first in a series of baseline inspections has been conducted, resulting in the preparation of monitoring and verification protocols for 15 sites. Detailed accounts of inspection and destruction activities can be found in appendices II and III respectively.

21. Further biological inspections were conducted as part of the baseline inspection process. One team visited over 30 sites, obtaining much information needed to design ongoing monitoring and verification in the biological area. A second inspection team inventoried and tagged dual-purpose biological equipment, particularly equipment related to production. Talks were also held to clarify certain issues in the biological area.

22. On ballistic missiles, efforts have concentrated on three main aspects: trying to establish a definitive material balance for SCUD-type missiles and other prohibited items; conducting baseline inspections of Iraq's dedicated and supporting missile plants and dual-capable facilities; and tagging relevant equipment and missiles (see appendix II).

23. Aerial surveillance activities have continued apace, using both U-2 and helicopter platforms. The U-2 continues to be used both in survey mode and to provide detailed photography of sites in preparation for ground inspections. Helicopter missions continue to be flown in support of ground inspections and to provide a time-series photographic record of sites which will need monitoring under the plans for ongoing monitoring and verification.

#### C. Iraq's declarations

24. Since its acceptance of resolution 715 (1991), Iraq has sought to address the Commission's concerns on the provision of data, both in relation to the full, final and complete disclosures and in relation to the declarations of current and recent dual-purpose capabilities due under the plans for ongoing monitoring and verification. There remains some doubt, however, that Iraq is fully cooperating in this regard, particularly as it maintains its claim to have destroyed all documentation and not to be able to recall certain key facts. The lack of documentation continues to present the Commission with the problem of how to verify Iraq's account of its programmes and with the problem of what confidence it can have that it has fully accounted for Iraq's banned capabilities. In this regard, the lack of documentation has been one of the principal delaying factors. That said, there has been a marked change for the better in Iraq's willingness to address the Commission's concerns, particularly in relation to current dual-purpose facilities.

25. A more detailed description of developments in this regard is to be found in the relevant sections of appendix II.

#### D. Export/import monitoring mechanism

26. By paragraph 7 of its resolution 715 (1991), the Security Council requested "the Security Council Committee established under resolution 661 (1990) ... the Special Commission and the Director General of [IAEA] to develop in cooperation a mechanism for monitoring any future sales or supplies by other countries to Iraq of items relevant to the implementation of section C of resolution 687 (1991) and other relevant resolutions, including the present resolution and the plans approved hereunder".

27. A draft proposal for an export/import monitoring mechanism was prepared by the Office of the Special Commission in consultation with the IAEA Action Team. The agreed text was then submitted on 13 May 1994 to the Committee established under resolution 661 (1990) (i.e., the Sanctions Committee). At the time of writing, it is expected that the Sanctions Committee will take action in the near future on the proposal and submit it to the Security Council for adoption in a further resolution under Chapter VII of the Charter of the United Nations.

28. The proposal envisages a system of timely notification, rather than licensing, of exports from States and imports into Iraq of items which are covered in the annexes to the Commission and IAEA plans for ongoing monitoring and verification. Iraq, both as importer and the exporting State, will be required to give advance notice of its acquisition of items covered by the plans. A principal consideration in designing the proposal has been the need for a mechanism robust enough to deter Iraq from potential breaches. Nevertheless, to be workable, the mechanism must also be sufficiently simple so as not to place an undue reporting burden on Governments. The mechanism will be buttressed by the ability of the Commission and IAEA to conduct unlimited inspections throughout Iraq.

#### V. ISSUES AND PRIORITIES FOR THE FUTURE

29. The situation is very different, generally for the better, from that which obtained at the time of the last report. Iraq has accepted resolution 715 (1991) and the plans for ongoing monitoring and verification. It has provided the Commission much new information about both its past programmes and its dual-purpose facilities. It is committed publicly to cooperate with the Special Commission and IAEA in the implementation of ongoing monitoring and verification and to respect their rights and privileges in doing so. Inspection teams are no longer subjected routinely to obstruction or intimidation, rather as a rule receiving the support and assistance they request from their Iraqi counterparts.

30. However, work remains to be done. In order for the Commission to be able to report to the Council that the requirements of the relevant Security Council resolutions have been fulfilled, it must be able to answer two questions in the affirmative:

- Is the Commission confident that it has accounted for and eliminated all of Iraq's banned capabilities?
- Is the Commission confident that it has an effective ongoing monitoring and verification system in place and operational, i.e., one that could deter or detect in time a clandestine attempt to reactivate the banned programmes?

31. Further work still needs to be done to clarify outstanding issues in relation to the past programmes. The speed with which that can be resolved is primarily dependent on Iraq's openness and honesty and, to a lesser degree, supplier Governments' responses to the Commission's requests for assistance in verifying Iraq's accounts of imports.

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32. Establishing an effective ongoing monitoring and verification system is no simple task and allows no short cuts. Each site to be monitored needs to be inspected thoroughly and a monitoring and verification protocol prepared for it. This entails preparation and collation of data and imagery from all previous ground and aerial inspections with the results of the Commission's analysis of these. Sensors and tags have to be identified and installed. So long as Iraq continues to cooperate, however, the system should be established soon.

33. Establishing an export/import monitoring mechanism also requires further work (see para. 27 above). After adoption by the Security Council of the necessary resolution approving the mechanism, States will have to take the steps necessary to give internal effect to the mechanism.

## Appendix I

### Financial and organizational issues

#### A. Current and future financial mechanism

1. When the Security Council created the Special Commission in April 1991, the organizational structure and the financing arrangements focused upon the identification and destruction phases of the work of the Special Commission and IAEA. At that time, these phases were seen as being of limited duration. Ad hoc measures for staffing and financing were thus resorted to. These included two Security Council resolutions, 706 (1991) and 712 (1991), permitting limited sales of Iraqi oil. Iraq refused to comply with those resolutions. The Council thus adopted, in October 1992, resolution 778 (1992), calling for the transfer of Iraqi assets under third-party control to an escrow account administered by the Secretary-General. Funds deposited in this account have allowed the Special Commission and IAEA to cover their operating budget, total expenditure reaching \$55.2 million by the end of 1993. This amount includes \$13 million for the first phase of the contract for the removal of nuclear fuel.

2. To date, the Commission and IAEA have been able to operate on this very uncertain financial basis. However, as the Commission and IAEA move into ongoing monitoring and verification, which will be of indefinite duration, it will be necessary for a solid financial base to be established, which will provide the assurance of adequate and continuous financing free of Iraqi control. This is an issue to which the Security Council will have to address itself when it contemplates action on paragraphs 21 and 22 of resolution 687 (1991).

#### B. Organizational issues

3. Following Iraq's acceptance of resolution 715 (1991), the Commission's activities have focused increasingly on the implementation of the plans for ongoing monitoring and verification. These require, *inter alia*, that Iraq provide regular and detailed information on activities, equipment and programmes which fall under the regime. Under a new export/import control regime, Member States will also provide a large volume of data. For the Commission's part, this information will be verified by on-site and aerial inspections, information provided from other sources and through the use of various monitoring devices installed at facilities.

4. The organizational and administrative structure of the Commission in New York and in Iraq is being adapted to allow the Commission to maintain its current level of support for intrusive operations while meeting the requirements for ongoing monitoring and verification.

#### New York

5. Additional staff in the chemical, biological, ballistic and export/import control areas have been provided to the Commission by supporting Governments to

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assess Iraq's declarations, to develop monitoring and verification protocols and to draft procedures for the export/import monitoring mechanism. It is anticipated that the Commission will require, for the next six months, six experts in support of chemical activities, six for ballistic and four for biological. The nuclear component of the Commission will remain at two. Data analysis and photographic imagery will have a total of five staff. Additional staff will also be brought in for the development of operational plans for export/import control.

#### The Baghdad Ongoing Monitoring and Verification Centre

6. The activities of the Commission with regard to ongoing monitoring and verification will require an expansion of its facilities in Baghdad. Plans have been drawn up for the establishment of the Baghdad Ongoing Monitoring and Verification Centre. The Iraqi side was informed of these plans, responding to them positively and designating the premises of the United Nations located in the Canal Hotel as the site for the Centre. This Centre will serve the requirements of both the Commission and IAEA. A Director for the Centre has been recruited.

7. Additional office space to accommodate an expanded presence has been identified. Communication equipment has been ordered to increase the total of telephone lines to New York to five, which will allow transmission of data between Baghdad and New York. Data from sites monitored with cameras and other sensors will be transmitted as required to the operations room via telephone and radio links. For this purpose, a 100-metre communications mast provided by Iraq is being erected at the Canal Hotel. Facilities will be available for analysing the data received from the monitored sites and for archiving essential information required in Baghdad. Computers capable of storing relevant protocol information in an electronic form will be installed. The Aerial Inspection Team will be able to process photographs in Baghdad and integrate imagery into the monitoring and verification protocols.

8. Great attention was given to achieving the highest possible level of security at the Centre in order to protect the information gathered and to allow inspectors and analysts to conduct their work in a protected environment.

9. The Operations Room will be moved from the Sheraton Hotel to the Canal Hotel once the construction work in the Canal Hotel is completed. A secure telephone extension will be maintained at the Sheraton Hotel for the use of inspection teams.

10. The support staff will be increased to maintain and operate communications, data collection and analysis equipment which will be acquired by the Commission. In addition to the support staff, Governments will be requested to provide resident experts in aerial imagery, ballistic missiles, chemical weapons and chemical industry, microbiology, nuclear technology and export/import control. They will be sent to Baghdad for a three- to six-month tour of duty. Training in monitoring techniques and in the maintenance of the monitoring equipment will be organized.

11. The Commission hopes that all equipment required to operate the Centre, i.e., communication equipment, office furniture, video cameras, motion sensors, chemical and biological samplers, photo imagery equipment and the database computers, will be provided by contributing Governments as a donation, on a loan basis, or to be reimbursed upon availability of funds from Iraq.

12. While personnel are being recruited and equipment purchased for the task of ongoing monitoring and verification, the Chemical Destruction Group was disbanded at the completion of its task. Personnel have returned to their countries of origin, as has most of the equipment supplied to the Group.

## Appendix II

### Inspection activities

#### A. Missiles

1. Iraq's acceptance of its obligations under Security Council resolution 715 (1991) led to intensive work to establish a monitoring mechanism of missile-related activities and dual-purpose capabilities in Iraq pursuant to the Plan for ongoing monitoring and verification in the non-nuclear area (S/22871/Rev.1 of 2 October 1991). These efforts included a number of inspections, assessment of Iraq's declarations submitted under the Plan, identification of focal points for monitoring and appropriate monitoring techniques, including their field trials, preparation of draft monitoring and verification protocols and in-depth discussions with the Iraqi side of monitoring issues, including during the rounds of high-level talks both in New York and Baghdad. In parallel, the Commission continued its investigation into Iraq's past prohibited missile programmes and its compliance with resolution 687 (1991).

#### 1. Inspection activities

##### (a) BM20/UNSCOM66

2. BM20/UNSCOM66 operated in Iraq over the period from 21 to 29 January 1994. In view of Iraq's acceptance of resolution 715 (1991), BM20/UNSCOM66 was tasked to accomplish the following:

(a) To update data collected by previous inspection teams on Iraq's missile research and development programme;

(b) To examine issues related to Iraq's reporting on facilities to be monitored under the Plan for ongoing monitoring and verification in the missile area as approved by resolution 715 (1991);

(c) To conduct a preliminary survey for possible application of monitoring sensors and technologies.

3. BM20/UNSCOM66 visited a number of research and development and industrial facilities to be monitored under the ongoing monitoring and verification Plan. Iraq provided the team with a detailed update of its current missile programmes relevant to surface-to-surface missiles with a range greater than 50 kilometres.

4. BM20/UNSCOM66 carried out extensive work related to Iraq's reporting obligations under the Plan for ongoing monitoring and verification. This included discussions of Iraq's reporting on facilities to be monitored, examination of declarations submitted by Iraq in January 1994 pursuant to the Plan and practical on-site investigation of relevant issues. This work resulted in a draft format for Iraq's reporting on those missile research-and-development and production facilities that would be under the most intensive monitoring regime. During inspection and soon after it, Iraq submitted to the Commission

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reports under this format for all relevant facilities. As a result of BM20/UNSCOM66, Iraq also provided corrections to its January declarations under the Plan in the missile area. Iraq has yet to provide required data on some of its missile projects.

5. BM20/UNSCOM66 started a survey of sites where installation of sensors and use of other technologies might be appropriate for monitoring purposes. This survey addressed issues of inventory control of dual-purpose equipment, non-removal of equipment from declared facilities and monitoring of activities at facilities. Use of a variety of sensors and recording devices could be an important part of monitoring procedures under the Plan.

(b) BM21/UNSCOM69

6. BM21/UNSCOM69 was in Iraq from 17 to 25 February to accomplish the following:

(a) To assess Iraq's dual-purpose missile industrial capabilities that might be used in support of missile production;

(b) To continue compiling the database on Iraq's machine tools and equipment usable for missile production;

(c) To carry out an assessment of possibilities of installing sensors and using other technologies to monitor missile-related industrial activities.

7. BM21/UNSCOM69 visited 15 facilities in Iraq, identified a number of focal points for monitoring activities at those sites and carried out a survey for the use of sensors. The machine tool database built by IMT1C/UNSCOM57 was updated, new machines were recorded and some items were tagged.

8. The results of BM21/UNSCOM69 provided the Commission with the necessary background data to refine a scope of facilities for ongoing monitoring and verification under the Plan.

(c) BM22/UNSCOM71

9. Based on the results of BM20/UNSCOM66 and BM21/UNSCOM69, BM22/UNSCOM71 was organized to prepare draft monitoring and verification protocols for facilities identified so far by the Commission as needing to be subject to ongoing monitoring and verification. This was the first protocol-building team sent to Iraq as a part of baseline activities in the missile area under the Plan for ongoing monitoring and verification. Ongoing monitoring and verification protocols incorporate detailed procedures and information required for monitoring activities, using a variety of different means at sites in Iraq covered by the Plan. They will also contain a systematic collection of that information known about sites concerned necessary for effective monitoring and verification. Once created, a protocol for a given site would be updated as necessary on the basis of the findings of monitoring and verification activities.

10. BM22/UNSCOM71 carried out its activities in Iraq from 30 March to 20 May 1994 through a succession of rounds of visits to Iraq. The team visited more than 30 facilities to be placed, depending on the nature of their activities, under different regimes of monitoring. During these visits, the team verified on-site Iraq's declarations concerning these facilities. The team also conducted the survey of the sites to identify focal points for monitoring activities. BM22/UNSCOM71 has submitted to the Commission for approval draft ongoing monitoring and verification protocols with recommendations for monitoring arrangements and inspection modalities at the facilities to be monitored. These recommendations, include, inter alia, suggestions for the installation of cameras of different types and for tagging and monitoring missile-related and dual-purpose equipment. The recommendations also contain proposals for on-site inspection programmes for each facility, amounting to a total of more than 100 inspection visits per year. Successful completion of BM22/UNSCOM71 marked a large and critical step towards the creation of a monitoring and verification regime in the missile area.

(d) BM23/UNSCOM79 and BM24/UNSCOM80

11. BM24/UNSCOM80 began its mission in Iraq on 10 June. This inspection team is tasked to conduct tagging of a number of operational missile systems in Iraq covered by the Plan for ongoing monitoring and verification. The Plan provides for monitoring of missiles designed for use, or capable of being modified for use, in a surface-to-surface role with a range greater than 50 kilometres.

12. The purpose of this tagging operation is to assist the Commission in effective monitoring of non-modification of a number of missile systems and keep a reliable inventory control of missiles under monitoring. In total, BM24/UNSCOM80 tagged more than 1,300 missiles of different types. All missiles were tagged by UNSCOM inspectors, with Iraq's authorities providing preparations and support necessary for safe and efficient operations. BM24/UNSCOM80 also visited a number of sites to ascertain that they were not suitable for prohibited modification activities.

13. After the baseline activities related to operational missiles are completed, the Commission will request Iraq, up to three times per year, to assemble a limited number of tagged missiles for purposes of inspecting them and making sure that they have not been modified to enable missiles to reach a range greater than 150 kilometres. The Commission will select for each inspection up to 10 per cent of the quantity of tagged missiles.

14. As of this writing, BM24/UNSCOM80 is completing its mission in Iraq, with departure planned for 24 June 1994.

15. Monitoring arrangements for operational missiles, including tagging, required extensive preparations and elaboration of appropriate operational modalities. BM23/UNSCOM79 was in Iraq from 23 to 28 May 1994 to conduct preparations for BM24/UNSCOM80. BM23/UNSCOM79 checked on-site work areas for tagging operations and other preparatory work done by the Iraqi authorities for the tagging activities. Prime attention was paid to the safety aspects of working with live missiles. Special operational procedures were established by the Commission for this purpose.

16. BM23/UNSCOM79 also established a technical reference baseline for Iraq's missile systems of interest to the Commission. Reference data for each missile system was gathered to include measurements and photography of major parts and components. The data collected will be used to establish "official" UNSCOM missile configurations for each missile system for use in future inspections and to support automated processing of data collected from the monitoring cameras.

(e) BM25/UNSCOM81

17. BM25/UNSCOM81 arrived in Baghdad on 14 June 1994 and plans to accomplish its mission by 22 June 1994. The objectives of this team were twofold: to present to Iraq's experts definitions elaborated by the Commission of the dual-purpose items contained in annex IV of the Plan for ongoing monitoring and verification, and to discuss certain aspects of the past prohibited activities in Iraq, including missile production and modification projects.

(f) Sensors and tagging

18. Remote-monitoring cameras remain at the two missile test stands. They continue to work in a satisfactory manner and the data obtained allow UNSCOM to monitor on a continuous basis Iraq's static missile testing programme.

19. During December 1993, a team was sent to Baghdad to upgrade these systems. The upgrade gave UNSCOM a better analysis capability by installing higher-resolution cameras. The team also placed the cameras in different areas of the sites, allowing for a better field of view. Telephone-line transmission of signals from the sites to the UNSCOM office in Baghdad was replaced by radio transmission to allow for reliable communications.

20. As mentioned above, BM20/UNSCOM66, BM21/UNSCOM69 and BM22/UNSCOM71 conducted surveys of the missile research-and-development and production sites in Iraq to determine where to install sensors and employ tags for monitoring purposes. Their recommendations included the use of monitoring cameras for what was considered to be critical areas of these facilities. The teams made a number of proposals on the use of tags and different types of sensors to help identify and monitor specific activities and equipment.

21. Experts will visit Iraq in July to install cameras and to tag equipment identified for monitoring. They will also install equipment in the Baghdad Ongoing Monitoring and Verification Centre to control these systems. Initially, there will be two basic types of cameras. Both will be time-lapsed video, one with motion sensors and one without. All camera systems will be capable of transmitting data to the Centre.

2. Other activities

22. In support of its efforts to establish a mechanism for ongoing monitoring and verification, the Commission held a number of meetings with international experts. During these meetings, issues discussed related to the assessment of Iraq's declarations, identification of critical points for monitoring missile-related activities and appropriate techniques, including sensors, to ensure

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effective monitoring. Lists of dual-purpose equipment, technologies and other items that could be used for the development, production, modification or acquisition of ballistic missiles with a range greater than 150 kilometres were also discussed.

### 3. Past prohibited activities

23. The Commission continued its investigation of the outstanding issues related to the past missile programme proscribed under resolution 687 (1991). This work is essential to establish a solid and verified baseline for ongoing monitoring and verification in accordance with resolution 715 (1991). In particular, this will allow the Commission to have a full and comprehensive picture of the knowledge Iraq obtained in the missile area through its past activities.

24. Issues related to programmes proscribed under section C of resolution 687 (1991) were discussed with Iraq on a continuous basis, especially during the rounds of the high-level talks in November 1993 and March 1994 in New York. Iraq has furnished additional details on foreign acquisition of critical ballistic missile items as well as its expenditure of ballistic missiles with a range greater than 150 kilometres. Verification of this and other information provided by Iraq continued, including through contacts with Governments that possess data of relevance to this work.

25. The Commission continued to reiterate its request that Iraq provide original documentation that would substantiate the declarations made by Iraq concerning its past prohibited missile programmes. During the February visit of the Executive Chairman to Baghdad, Iraq finally agreed to give the Commission files on the expenditure of prohibited missiles. This documentation covers the period from 1977 to December 1990 and accounts for nearly three quarters of the missiles covered by resolution 687 (1991) and declared by Iraq. Currently, the Commission is conducting an in-depth investigation of these documents and the information contained therein. The results of this investigation will be critical for the Commission's reporting to the Security Council under paragraph 22 of resolution 687 (1991).

## B. Chemical weapons

### 1. Inspection activities

26. CW12/UNSCOM65 was constituted at short notice to investigate persistent reports that chemical weapons had been used by Iraqi Government troops against opposition elements in the southern marshes of Iraq. Initially, the team assembled as a fact-finding mission and visited the Islamic Republic of Iran to obtain clarifications about the allegations from persons claiming to have witnessed the incident, specifically to obtain an exact location of the site at which the alleged chemical weapon attack took place. Upon obtaining this information, this team returned to Bahrain for further preparations and entered Iraq, as CW12/UNSCOM65, on 19 November 1993.

27. During the inspection, the team conducted a thorough inspection of the site and took a large number of soil, water, flora and fauna samples which were analysed in various laboratories expert in the analysis of such samples. The team also inspected the area around the site of the alleged attack. Vehicles, boats and helicopters were used in the survey. During the inspection, the team did not find any immediate evidence of the use of chemical weapons. One unexploded munition was discovered at the site but was in too dangerous a condition for the team to take samples from. Consequently, a second team of explosive demolition experts from the Commission's Chemical Destruction Group at Muthanna was dispatched to the site, on 25 November 1993, and concluded that the munition was not a chemical munition but a highly explosive rocket-propelled grenade. It was destroyed by the experts.

28. In the course of its investigation, the Commission has also obtained some documents, which were examined and retained for forensic examination and analysis.

29. The chemical analysis of the samples, undertaken in laboratories in the United Kingdom of Great Britain and Northern Ireland and the United States of America, showed no evidence of the presence of chemical-weapons agents in the samples and so indicated that chemical weapons had not been used during the previous two years in the inspected area (the southern marshes of Iraq). The environmental conditions (e.g., flora and fauna) observed and documented by the team supported the results of the analysis. Based on these results, the forensic examination of the documents, which Iraqi opposition personnel claimed proved the use of chemical-weapons agents, was cancelled.

30. In the period from 1 to 11 February 1994, CW13/UNSCOM67 inventoried and tagged approximately 240 pieces of dual-use chemical production equipment. This equipment had been procured under the auspices of Iraq's chemical warfare programme.

31. The team also visited the Ibn al Baytar facility in order to create a monitoring and verification protocol for that site. The purpose was to assess whether the general model for monitoring and verification protocols developed in the Commission's headquarters in New York were indeed applicable in practice to dual-purpose chemical facilities.

32. As a result of CW13/UNSCOM67, the Iraqi side received on 14 March 1994 an official letter specifying those items of the chemical production equipment which the Commission had decided should be destroyed. Iraq was provided with precise descriptions of the items. In addition, Iraq was asked to provide, by 30 April 1994, a detailed description of the intended permitted future use of the remaining tagged equipment for a final decision on their disposal. Otherwise, the Commission would also have to consider whether the items would also need to be destroyed. Those items not destroyed would then be subjected to ongoing monitoring and verification.

33. During the period from 20 to 26 March 1994, CW14/UNSCOM70 installed four air samplers at the Muthanna site. These samplers are designed to determine the types and levels of chemicals in the air at that site. The team also employed portable samplers which took additional samples for gaining an even more

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comprehensive survey of the air at Muthanna. The samplers were installed in a pattern which would cover air quality on the site from all wind directions. An Iraqi maintenance and construction crew prepared the mounting poles for the samplers. The samplers were programmed to sample the air around the clock in a discontinuous mode for a 30-day period. The sample tubes are to be removed, replaced with fresh tubes every 30 days and sent to laboratories for analysis. The sampler mechanism is microprocessor-controlled and is powered by a storage battery which is charged by a solar panel. A microprocessor-driven meteorological station is mounted on one of the samplers to record hourly wind speed, wind direction, temperature and humidity. This meteorological data is to be down-loaded each time the sampler tubes are changed and will become part of the permanent record of the sample set.

34. CW15/UNSCOM74 conducted its activities in Iraq from 19 to 21 April 1994. Its task was to verify the additional information provided by Iraq in the course of the technical part of the high-level talks held in mid-March 1994 in New York. Owing to Iraq's claim that all documents concerning the past programmes of weapons of mass destruction had been destroyed in 1991 and 1992, the team had to resort to indirect proofs. This included interviews with senior personnel involved in Iraq's past chemical weapons programme as well as in Iraq's data recollection seminars held over the period January-March 1994.

35. The Iraqi side was able to provide a credible overview of the past chemical weapons-activities between 1980 and 1988 and in 1990. A major step forward was the presentation of a handwritten copy of the inventory of the procurement activities between 1982 and 1988. This contained a list of "Letter of Credit" numbers, with additional details on suppliers, values of contracts and general description of goods. Iraq claimed the list covered all procurement activities of the chemical weapons programme. An initial evaluation shows that the Iraqi presentation seems to be credible and possibly complete. However, a thorough examination will require much work and a further round of contacts with the supplier Governments.

36. Iraq, during this inspection, claimed that, when the chemical weapons programme was recommenced in 1980, "the Project" could rely for the first two years on the resources of a previous unsuccessful operating organization which stopped its activities in 1978. It was claimed that all procurement activities related to Iraq's chemical weapons programme were cancelled in summer 1988 at the end of the Iran-Iraq war. In 1989 only pesticides were formulated or produced at SEPP/MSE. Iraq claims that the production of live agents was resumed for only one month in 1990. Iraq also admitted, for the first time, that it received direct support from a foreign country in the chemical weapons programme.

37. During this inspection, Iraq also presented its intentions concerning the reuse of dual-use chemical production equipment in civilian projects, such as the production of phenol and aniline. The Iraqi Ministry of Chemical Industry intends to make use of the infrastructure of the former chemical weapons-related areas at Fallujahs 1, 2 and 3 by establishing a chemical centre for the production of general chemicals and fine chemicals. Production would be at a rate of several hundred to some thousand tonnes per year. A very preliminary evaluation of this intended use of the equipment is that it seems reasonable.

UNSCOM always has the possibility to trace the whereabouts of the production equipment.

38. CW16/UNSCOM75 was a "protocol-building" mission that visited 14 sites of chemical interest between 25 May and 5 June 1994. The protocol for each site is a complete folder containing information on the site, Iraqi declarations, UNSCOM assessments and guidance for future inspectors. The sites visited had varying levels of interest for future chemical weapons inspections. Some sites are of high interest since these sites still retain the potential to revert to chemical weapons precursor production. They have equipment, personnel and know-how which could be brought into a chemical weapons operating mode in a relatively short period. Other sites visited have less potential to be converted for use in a chemical weapons programme. There are a total of 47 sites for which protocols are to be developed. The remaining sites will be covered in two more missions.

39. For information on CW17/UNSCOM76, CW18/UNSCOM77 and the conclusion of CDG/UNSCOM38, see appendix III.

## 2. Data collection

40. In parallel with the various rounds of high-level political talks, UNSCOM experts have held three technical meetings with Iraq on chemical weapons issues.

### (a) Past programmes

41. In the course of the meeting held in New York in November 1993, Iraq stressed that it had tried to meet all the requirements put forward by the Commission on the provision of information. However, Iraq agreed to endeavour to address any questions that might arise during the Commission's verification activities. The Commission, for its part, informed Iraq that it had assessed as credible the information provided in the talks held in Baghdad in October 1993 regarding Iraq's past chemical weapons programme. However, in the absence of documentation, independent verification of the data remained problematic. The Commission suggested that Iraq, in order to address this problem in part, hold seminars of the officials involved in the chemical weapons programme aimed at stimulating the collective memory to remember details which might facilitate independent verification. The issue of equipment and chemicals left at the Muthanna State Establishment was also discussed. It was agreed that the Commission should send a mission to Baghdad in January 1994 to mark equipment in order to prepare an inventory as to the release or disposal of that equipment. Further discussion was reserved on the release or disposal of chemicals remaining at the site.

42. During the meeting held in Baghdad in February 1994, Iraq informed the Commission of the results of its seminar with senior Iraqi personnel formerly involved in the chemical weapons programme. Additional data on outstanding issues, e.g., the research-and-development programme and imports of precursor chemicals, were provided.

43. During the meeting held in New York in March 1994, the Commission asked Iraq for additional details to fill in gaps in previously provided information.

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In response, Iraq presented the results of another seminar it had convened, this time involving retired former officials. These included a breakdown of the quantities of imported precursor chemicals by year and contract. In addition, Iraq was able to present a correlation, on an annual basis, between produced quantities of agents, available precursor chemicals, stored and consumed agents and available chemical production capacity. A complete overview of its chemical weapons research-and-development programme, including time-frames, was also provided.

44. The additional information obtained during the course of these meetings was essential to the Commission's efforts to obtain as full a picture of Iraq's chemical weapons programme as possible. For example, in October 1993 Iraq declared 13,221 tonnes of traceable imported precursor chemicals, in February 1994 15,037 tonnes, and in March 1994 17,657 tonnes. The declared quantities of produced agents, however, remained unchanged at 4,340.5 tonnes.

45. CW15/UNSCOM74 considered that, during the April discussions held in Baghdad, Iraq had presented to the best of its ability the history of its chemical weapons programme. The orders of magnitude of the declared figures appear credible and the account presented is now more internally consistent than previous accounts. While little new information was divulged on Iraq's chemical weapons research and development, production and weaponization, some of the Commission's earlier conclusions on these matters were corroborated.

46. As supporting documentary evidence for its declarations, Iraq provided a handwritten extract of a list of letters of credit issued for the purpose of purchases for the chemical weapons programme. The list provides some possibility to verify, through contacts with the Governments of the companies named in the list, Iraq's declared imports for the programme. This process of contacting the Governments concerned is well under way, but here UNSCOM is highly dependent on the timely assistance of the Governments.

(b) Declarations of dual-purpose facilities

47. In December 1993, the Commission provided Iraq with model formats for the latter's initial declarations, required under the plan for ongoing monitoring and verification, of dual-purpose chemical facilities. On 16 January 1994, Iraq delivered to the Commission's Field Office in Baghdad partially completed formats. At subsequent meetings of the two sides, Iraq was informed by the Commission of the inadequacies of these returns and of what was required to bring them into conformity with the Commission's requirements. Iraq was told that full initial declarations were one of the main prerequisites for the protocol-building procedure and hence for the initiation of ongoing monitoring and verification. Since then, several meetings of experts from the two sides have addressed this issue, with the result that the Commission now has a more complete set of declarations for such facilities.

### C. Biological weapons

#### 1. Inspection activities

48. The first biological inspections in the baseline process started with the fourth biological inspection team (BW4/UNSCOM72), which conducted its activities in Iraq from 8 to 26 April 1994. This inspection verified the declarations submitted by Iraq in January 1994 pursuant to the Plan for ongoing monitoring and verification. Other objectives of this inspection were: to provide an assessment of the work being undertaken and of the equipment present at those biological facilities declared by Iraq, many of which had not previously been visited by UNSCOM; to establish an inventory of said equipment for future tagging; to draft a format for Iraq's regular reports under the monitoring and verification plan; and to provide a preliminary feasibility study regarding remote monitoring of some of the facilities.

49. During the period from 28 May to 7 June 1994, an inspection (BW5/UNSCOM78) was conducted to construct an inventory of biological dual-purpose equipment. The equipment of interest was located in a variety of facilities involved mainly in biological production or research and development. The inventory was developed in three stages: marking of the items of interest with tamper-proof, bar-coded, polymer-coated tape; close-up photography of these items; and the entry of such items and their codes in the inventory. The inventory will provide an overview of Iraq's biological capabilities through accountability of the equipment's use, transfer or modification.

#### 2. Data collection

50. Following the presentation of Iraq's declarations in January 1994, high-level talks were conducted with Iraqi officials in February and March 1994. These discussions focused upon the information to be provided by Iraq for an efficient and effective monitoring of the biological area. The outcome of these discussions was the provision by Iraq of a new version of the declarations required under the Plan in a form which would allow the accuracy and completeness of the information to be analysed.

51. During BW4/UNSCOM72, further discussions were held with Iraq concerning additional facilities subject to declarations under the Plan for ongoing monitoring and verification. Subsequently, Iraq made supplementary declarations on these sites. In early June 1994, a team of experts held technical talks in Baghdad with Iraq on biological issues aimed at clarifying or completing information previously provided under the Plan, in order to facilitate the analytical work required to establish a monitoring regime for all the sites.

#### 3. Seminars of experts in New York

52. In March 1994, a seminar of international experts was held in New York to prepare for inspections connected with establishing the biological baseline. In May 1994, a further seminar was held as part of the Commission's efforts to review all declarations and data on Iraq's biological capabilities. Discussions

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focused on the establishment of criteria for use in assessing data on Iraq's relevant biological activities and on the identification of items to be controlled through the export/import monitoring mechanism. Further seminars are planned to discuss the following aspects of the biological elements of the Plan: sensors and other monitoring technologies; monitoring modalities; and requirements for the training of inspectors.

#### 4. Protocol-building efforts

53. Efforts to build the protocols for each biological site are under way. The information relating to the geographical location has been compiled. Further information will be obtained throughout the baseline process. A draft of the format for information to be provided by Iraq has been developed.

#### 5. Remote monitoring and tagging trials

54. A feasibility study of monitoring by cameras was conducted during BW4/UNSCOM72. Further efforts in this field will be effected initially by way of seminars. Tagging technologies have already been identified and deemed appropriate with respect to bio-technological equipment. Based on the results of these seminars and information from inspections, cameras and additional tags may be installed at a later date.

#### D. Nuclear

55. Activities in the nuclear area are reported separately by IAEA. However, the Special Commission conducted a second gamma aerial survey from 2 to 15 December 1993. During that mission, the team surveyed six sites. It obtained detailed gamma spectra at radioactive disposal areas at Tuwaitha as well as two areas at Al Atheer. In addition, gamma surveys were conducted at Rashdiya, Al Hadre, a site near Tikrit, and Salah Al Din State Establishment (SAAD-13). While the data are still being analysed, early indications show the power of this capability to survey rapidly a relatively large area and to pinpoint particular sites for more detailed investigation. This system is still being developed, and improvements are under way.

#### E. Aerial inspections

56. The Commission's aerial inspections, using both helicopters and high-altitude surveillance aircraft, continued over the period under review. The Commission's high-altitude reconnaissance aircraft (U-2) now flies once or twice a week, having flown a total of 209 missions since the inception of its use in support of the Commission's operations. The Commission's helicopters have now flown over 300 missions, covering some 450 sites. The Aerial Inspection Team currently conducts three to four flights a week. In all, the Commission's helicopters have completed over 2,000 flying hours in direct support of the Commission's activities.

### Appendix III

#### Destruction of Iraq's chemical agents and munitions

1. A full background report on chemical destruction activities has been given in previous reports. The present report focuses solely on developments since December 1993 and the closing down of the Chemical Destruction Group.

#### Safety and security aspects

2. The high level of safety standards at Muthanna has been maintained over the reporting period. As in the past, Iraqi requests to lower some standards in order to speed up work have been rejected. Efforts to educate the Iraqi side about safety standards made some slow progress. However, set-backs occurred from time to time but were all contained without serious accident because of quick action of the Chemical Destruction Group.

3. UNSCOM observed increasing pressure on the Muthanna management since November 1993, when the Iraqis started to speed up the support of destruction activities. Most of the minor incidents occurred between November 1993 and April 1994 and can be seen as a direct result of pressure on the Muthanna management from the Government of Iraq. UNSCOM has provided about 100 protective suits to Iraqi workers at Muthanna. The offer was accepted very reluctantly. In summary, the high safety standards have paid dividends.

#### Destruction activities

4. The destruction of chemical warfare agents and precursors was completed by early April 1994. Destruction figures are listed below. A number of missile solid-propellant components were also destroyed in May 1994.

5. After 6 April 1994, the Chemical Destruction Group concentrated on the destruction of dual-use chemical production equipment. The identification and the tagging of this equipment was the main objective of UNSCOM 67 in January/February 1994. That mission provided the Executive Chairman with recommendations for the categories of equipment to be destroyed or returned to Iraq. As noted in appendix II, section B, on the occasion of high-level talks in New York in March 1994, Iraq received a letter containing the Executive Chairman's decision on the destruction of equipment. This provided the basic reference for the activities of the Chemical Destruction Group. Besides single pieces of equipment, the main installations which have been destroyed and partly sealed off are the hydrolysis plant, pilot plants, the aerosol test chamber, the DF plant, and the mustard plant.

6. Bunkers and specially designed, concrete-lined lagoons which have been used for the storage of chemical waste from destruction activities have been sealed off with reinforced concrete according to the directions given by the Destruction Advisory Panel. The incinerator has been given back to the Iraqi authorities. However, all tubes and valves around the burning chamber have been dismantled and stored in bunkers, as they were heavily contaminated.

Closure of the Chemical Destruction Group

7. The closure of Muthanna comprised the following steps:

(a) An area sweep. The main effort fell on those areas where the Group had conducted its major activities (e.g., incinerator, hydrolysis plant, accumulation areas). In parallel, full documentation on bunker sealing was prepared. This was followed by an extended check and sweep, i.e., a clean-up operation. This stage was completed in mid-May 1994;

(b) Two UNSCOM inspections, the first of which (CW17/UNSCOM76) operated from 31 May to 12 June 1994. Its aim was to take samples and to analyse them in real time at Muthanna in order to provide hard data on the state of the site at Muthanna at the time of handover. These results were incorporated into the Muthanna handover protocol, prepared by the follow-on inspection (CW18/UNSCOM77), which operated from 8 to 14 June 1994. In order to ensure accurate transfer of results and full coordination, these two inspections overlapped by three days. CW18/UNSCOM77 conducted a final inspection and transferred responsibility for Muthanna back to the Iraqi authorities. On 14 June 1994, the Chemical Destruction Group (UNSCOM38) and CW18/UNSCOM77 left Iraq, and the Chemical Destruction Group was disbanded. In all, 100 experts served with the Group;

(c) Completion of final documentation on the Chemical Destruction Group in New York. All Group files will be kept in New York. A documentation team will cover every aspect of operations of the Group, making observations on lessons to be learnt and recommendations for any similar future operation.

Summary

8. The Chemical Destruction Group has successfully completed its mission. The disbanding of the Group on 16 June 1994 marked the completion of one of the Commission's prime mandates under Security Council resolution 687 (1991).

Totals for items destroyed at Al MuthannaDescription

|                                        |                |
|----------------------------------------|----------------|
| 122 mm rockets and warheads            | 319            |
| 122 mm warheads                        | 6 454          |
| 155 mm artillery shells - empty        | 12             |
| 155 mm artillery shells - mustard      | 12 792         |
| 155 mm artillery shells - WP <u>a/</u> | 45             |
| Al Hussein warhead (GB/GF)             | 16             |
| Al Hussein warhead - empty             | 13             |
| R400 bomb                              | 337            |
| 250 gauge bomb - oil-filled            | 5 176          |
| 250 gauge bomb - polymust <u>b/</u>    | 703            |
| 250 gauge bomb - empty                 | 12             |
| 250 gauge bomb - WP <u>a/</u>          | 8              |
| 500 gauge bomb - oil-filled            | 4              |
| 500 gauge bomb - polymust <u>b/</u>    | 980            |
| 500 gauge bomb - GA                    | 2              |
| DB 2 bomb - unfilled                   | 1 115          |
| DB O bomb - unfilled                   | <u>61</u>      |
| Total munitions                        | 28 049         |
| Mustard agent                          | 398 046 litres |
| Nerve agent (GA)                       | 21 365         |
| Nerve agent (GB/GF)                    | <u>61 633</u>  |
| Total CW agent                         | 481 044 litres |

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a/ White phosphorus.

b/ Partially filled with polymerized mustard agent.

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Description

|                                |               |
|--------------------------------|---------------|
| DF                             | 14 600 litres |
| D4                             | 121 675       |
| Thiodiethyleneglycol           | 153 980       |
| Phosphorus oxychloride         | 344 800       |
| Thionyl chloride               | 169 980       |
| Phosphorus trichloride         | 415 000       |
| Isopropyl alcohol              | 250 888       |
| Cyclohexanol/isopropyl alcohol | 5 200         |
| Dichlorethane                  | 4 120         |
| Di-isopropylamine              | 30 000        |
| Morpholine                     | 10 000        |
| Chlorobenzaldehyde             | 41 800        |
| Ethylchlorohydride             | 1 900         |
| Monoethyleneglycol             | 49 600        |
| Malononitrile                  | 200           |
| Ethanol                        | 112 700       |
| Thiokolpolysulphide            | 60            |
| 3-hydroxy 2-methyl piperdine   | 50            |
| Hydrogen sulphide              | 160           |
| Methanol                       | 42 000        |
| Toluene                        | 10 800        |
| Pyridine                       | <u>19 000</u> |

## Total precursor chemicals

1 798 513 litres

|                                |            |
|--------------------------------|------------|
| Dimethyl amine HCl             | 238 500 kg |
| Sodium cyanide                 | 180 000    |
| Potassium cyanide              | 3 000      |
| Potassium hydrogen di-fluoride | 450 000    |
| Sodium fluoride                | 135 000    |
| Arsenic trichloride            | 1 850      |
| Hydrogen fluoride              | 7 000      |
| Mandelic acid                  | 1 650      |
| Tri-ethanolamine               | 511        |
| Methyl dichloride              | 2 250      |
| Glycolic acid                  | 50         |
| Diethylaminoethanol thiol HCl  | 10         |
| 2-ethylaminoethanol            | 180        |
| Chloroacetic acid              | 2 500      |
| Dimethyl amine                 | 7 210      |
| Methyl iodide                  | 2 000      |
| Potassium fluoride             | 600        |
| Sodium chloroacetate           | 250        |
| Aluminium trichloride          | 2 800      |
| Potassium iodide               | 3 000      |
| Arsenic trichloride            | 75         |
| 2,4-dichlorophenol             | 2 250      |
| Trichlorophenol                | <u>150</u> |

## Total chemical precursors

1 040 836 kg

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Description

White phosphorus

648 barrels

Bulk storage containers

32 (2-tonne)

Appendix IV

The Information Assessment Unit

1. Following Iraq's acceptance of Security Council resolution 715 (1991), the work of the Information Assessment Unit has increasingly focused on the implementation of ongoing monitoring and verification. However, this has not been to the exclusion of work on past programmes, where substantial effort has been devoted to verifying Iraq's declarations concerning its former weapons of mass destruction programmes. The Information Assessment Unit also continues to analyse and assess information from supporting Governments and other sources concerning possible outstanding issues in relation to these programmes.

2. The steps under way in the different areas to implement ongoing monitoring and verification are described in detail elsewhere in the present report. However, from the perspective of the Information Assessment Unit, the main practical consequence of Iraq's acceptance of Security Council resolution 715 (1991) has been a vast increase in the amount and content of declarations provided by the Iraqi side. One set of declarations, for example, contained over 2,000 pages of material.

3. The present declarations are being provided in response to draft formats drawn up by the Commission which describe in detail the content and form of the information required for ongoing monitoring and verification. The declarations received in answer to these draft formats require assessment from a number of perspectives. These include reviewing the accuracy of the data supplied and the range and type of facilities declared. The declarations also contain a number of sites not previously inspected by UNSCOM; these need to be identified and preparations for initial inspections undertaken. An additional element of the review process is to assess whether the formats themselves require modification; this is an important aspect of the analysis process, since the final versions of the formats and the consequent declarations constitute an important part of the architecture for ongoing monitoring and verification.

4. In addition to reviewing declarations, a major project has been undertaken within the Information Assessment Unit to compile records for each site to be monitored, drawing upon, inter alia, past inspection reports, information from supporting countries and photography. These records will provide the analysts with a comprehensive record of the history of each site undergoing monitoring.

5. Interface with external organizations and other bodies continues to be of great assistance. As an example, over the course of the next six months a new computer system will be installed in the Unit. It will be capable of handling both textual and graphic material, thus providing a computerized version of the site records described in paragraph 4 above. The system is being developed by an outside agency for the Commission's current requirements and will be capable of adapting to the changing requirements of data handling which will be generated through ongoing monitoring and verification, for example, the development of a system to process the information which will be provided by Iraq and supplier Governments under the export/import control mechanism.

6. The Commission's aerial assets, the high-altitude surveillance aircraft (U-2) and the helicopter-borne Aerial Inspection Team, continue to fulfil their traditional roles. Both assets also provide a useful source of information for preparing for initial inspections at newly declared ongoing monitoring and verification-related sites. The Aerial Inspection Team plays a particularly useful role by preparing site diagrams for new facilities, in advance of ground inspections of the sites.

7. Following the successful introduction of ground-penetrating radar and gamma detection equipment in 1993, the use of additional airborne sensor devices continues to be explored. Further means of exploiting the Commission's current photographic product, as well as potential new sources of material, are being explored. These include the direct transmission of photography.

8. In order to assist with the greater volume of data and to facilitate the establishment of ongoing monitoring and verification, five additional experts have been seconded to the Information Assessment Unit this year. Two new posts have also been created for collators who will act as the interface between the data entry clerks and the analysts. A second computer expert is also being recruited. In addition to resident experts, the Information Assessment Unit also benefits greatly from short periods of assistance at the Commission by experts familiar with the inspection process.

Appendix V

Inspection schedule

(in-country dates)

Nuclear

|                                |                  |
|--------------------------------|------------------|
| 15 May-21 May 1991             | IAEA1/UNSCOM 1   |
| 22 June-3 July 1991            | IAEA2/UNSCOM 4   |
| 7 July-18 July 1991            | IAEA3/UNSCOM 5   |
| 27 July-10 August 1991         | IAEA4/UNSCOM 6   |
| 14 September-20 September 1991 | IAEA5/UNSCOM 14  |
| 21 September-30 September 1991 | IAEA6/UNSCOM 16  |
| 11 October-22 October 1991     | IAEA7/UNSCOM 19  |
| 11 November-18 November 1991   | IAEA8/UNSCOM 22  |
| 11 January-14 January 1992     | IAEA9/UNSCOM 25  |
| 5 February-13 February 1992    | IAEA10/UNSCOM 27 |
| 7 April-15 April 1992          | IAEA11/UNSCOM 33 |
| 26 May-4 June 1992             | IAEA12/UNSCOM 37 |
| 14 July-21 July 1992           | IAEA13/UNSCOM 41 |
| 31 August-7 September 1992     | IAEA14/UNSCOM 43 |
| 8 November-19 November 1992    | IAEA15/UNSCOM 46 |
| 6 December-14 December 1992    | IAEA16/UNSCOM 47 |
| 22 January-27 January 1993     | IAEA17/UNSCOM 49 |
| 3 March-11 March 1993          | IAEA18/UNSCOM 52 |
| 30 April-7 May 1993            | IAEA19/UNSCOM 56 |
| 25 June-30 June 1993           | IAEA20/UNSCOM 58 |
| 23 July-28 July 1993           | IAEA21/UNSCOM 61 |
| 1 November-9 November 1993     | IAEA22/UNSCOM 64 |
| 4 February-11 February 1994    | IAEA23/UNSCOM 68 |
| 11 April-22 April 1994         | IAEA24/UNSCOM 73 |
| 21 June-1 July 1994            | IAEA25/UNSCOM 83 |

Chemical

|                                |                |
|--------------------------------|----------------|
| 9 June-15 June 1991            | CW1/UNSCOM 2   |
| 15 August-22 August 1991       | CW2/UNSCOM 9   |
| 31 August-8 September 1991     | CW3/UNSCOM 11  |
| 31 August-5 September 1991     | CW4/UNSCOM 12  |
| 6 October-9 November 1991      | CW5/UNSCOM 17  |
| 22 October-2 November 1991     | CW6/UNSCOM 20  |
| 18 November-1 December 1991    | CBW1/UNSCOM 21 |
| 27 January-5 February 1992     | CW7/UNSCOM 26  |
| 21 February-24 March 1992      | CDG1/UNSCOM 29 |
| 5 April-13 April 1992          | CDG2/UNSCOM 32 |
| 15 April-29 April 1992         | CW8/UNSCOM 35  |
| 18 June 1992 ongoing           | CDG/UNSCOM 38  |
| 26 June-10 July 1992           | CBW2/UNSCOM 39 |
| 21 September-29 September 1992 | CW9/UNSCOM 44  |
| 6 December-14 December 1992    | CBW3/UNSCOM 47 |

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|                              |                |
|------------------------------|----------------|
| 6 April-18 April 1993        | CW10/UNSCOM 55 |
| 27 June-30 June 1993         | CW11/UNSCOM 59 |
| 19 November-22 November 1993 | CW12/UNSCOM 65 |
| 1 February-14 February 1994  | CW13/UNSCOM 67 |
| 20 March-26 March 1994       | CW14/UNSCOM 70 |
| 18 April-22 April 1994       | CW15/UNSCOM 74 |
| 25 May-5 June 1994           | CW16/UNSCOM 75 |
| 31 May-12 June 1994          | CW17/UNSCOM 76 |
| 8 June-14 June 1994          | CW18/UNSCOM 77 |

### Biological

|                             |               |
|-----------------------------|---------------|
| 2 August-8 August 1991      | BW1/UNSCOM 7  |
| 20 September-3 October 1991 | BW2/UNSCOM 15 |
| 11 March-18 March 1993      | BW3/UNSCOM 53 |
| 8 April-26 April 1994       | BW4/UNSCOM 72 |
| 28 May-7 June 1994          | BW5/UNSCOM 78 |
| 24 June-5 July 1994         | BW6/UNSCOM 84 |
| 5 June-8 June 1994          | BW7/UNSCOM 86 |

### Ballistic missiles

|                               |                    |
|-------------------------------|--------------------|
| 30 June-7 July 1991           | BM1/UNSCOM 3       |
| 18 July-20 July 1991          | BM2/UNSCOM 10      |
| 8 August-15 August 1991       | BM3/UNSCOM 8       |
| 6 September-13 September 1991 | BM4/UNSCOM 13      |
| 1 October-9 October 1991      | BM5/UNSCOM 18      |
| 1 December-9 December 1991    | BM6/UNSCOM 23      |
| 9 December-17 December 1991   | BM7/UNSCOM 24      |
| 21 February-29 February 1992  | BM8/UNSCOM 28      |
| 21 March-29 March 1992        | BM9/UNSCOM 31      |
| 13 April-21 April 1992        | BM10/UNSCOM 34     |
| 14 May-22 May 1992            | BM11/UNSCOM 36     |
| 11 July-29 July 1992          | BM12/UNSCOM 40 A+B |
| 7 August-18 August 1992       | BM13/UNSCOM 42     |
| 16 October-30 October 1992    | BM14/UNSCOM 45     |
| 25 January-23 March 1993      | IMT1a/UNSCOM 48    |
| 12 February-21 February 1993  | BM15/UNSCOM 50     |
| 22 February-23 February 1993  | BM16/UNSCOM 51     |
| 27 March-17 May 1993          | IMT1b/UNSCOM 54    |
| 5 June-28 June 1993           | IMT1c/UNSCOM 57    |
| 10 July-11 July 1993          | BM17/UNSCOM 60     |
| 24 August-15 September 1993   | BM18/UNSCOM 62     |
| 28 September-1 November 1993  | BM19/UNSCOM 63     |
| 21 January-29 January 1994    | BM20/UNSCOM 66     |
| 17 February-25 February 1994  | BM21/UNSCOM 69     |
| 30 March-20 May 1994          | BM22/UNSCOM 71     |
| 20 May-8 June 1994            | BM23/UNSCOM 79     |
| 10 June-24 June 1994          | BM24/UNSCOM 80     |
| 14 June-19 June 1994          | BM25/UNSCOM 81     |

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Special missions

30 June-3 July 1991  
11 August-14 August 1991  
4 October-6 October 1991  
11 November-15 November 1991  
27 January-30 January 1992  
21 February-24 February 1992  
17 July-19 July 1992  
28 July-29 July 1992  
6 September-12 September 1992  
4 November-9 November 1992  
4 November-8 November 1992  
12 March-18 March 1993  
14 March-20 March 1993  
19 April-24 April 1993  
4 June-5 July 1993  
15 July-19 July 1993  
25 July-5 August 1993  
9 August-12 August 1993  
10 September-24 September 1993  
27 September-1 October 1993  
1 October-8 October 1993  
5 October 1993-16 February 1994  
2 December-10 December 1993  
2 December-16 December 1993  
21 January-27 January 1994  
2 February-6 February 1994  
10 April-14 April 1994  
24 April-26 April 1994  
28 May-29 May 1994

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